

PATENT

S/N 09/787,641

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A synthetic middle distillate cut having less than 9 mass%, as determined according to IP 391 or ASTM D 5186 standards, aromatics content, between 0.44 mass% and 8.99 mass% monocyclic aromatics content, and less than 0.01 mass% polycyclic aromatics.
2. (Canceled)
3. (Canceled)
4. (Currently Amended) A synthetic middle distillate cut as claimed in ~~any one of the preceding claims~~ claim 1, having an isoparaffins to n-paraffins mass ratio of between about 1:1 to about 12:1.
5. (Original) A synthetic middle distillate cut as claimed in claim 4, wherein the isoparaffins to n-paraffins mass ratio is between about 2:1 to about 6:1.
6. (Original) A synthetic middle distillate cut as claimed in claim 5, wherein the isoparaffins to n-paraffins mass ratio is 4:1.
7. (Currently Amended) A synthetic middle distillate cut as claimed in ~~any one of the preceding claims~~ claim 1, wherein the synthetic distillate is derived from a FT primary product.
8. (Original) A synthetic middle distillate cut comprising more than 50% isoparaffins, wherein the isoparaffins are predominantly methyl and/or ethyl and/or propyl branched.

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9. (Original) A synthetic middle distillate cut as claimed in claim 8, wherein the gradient of an isoparaffins to n-paraffins mass ratio profile of the synthetic middle distillate cut increases from about 1:1 for C₈ to 8.54:1 for C₁₅ and decrease again to about 3:1 for C₁₈.
10. (Original) A synthetic middle distillate cut as claimed in claim 9, wherein a fraction of the synthetic middle distillate cut in the C₁₀ to C₁₈ carbon number range has a higher ratio of isoparaffins to n-paraffins than a C₈ to C₉ fraction of the synthetic middle distillate cut.
11. (Currently Amended) A synthetic middle distillate cut as claimed in claim 9 ~~or claim 10~~, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction is between 1:1 and 9:1.
12. (Original) A synthetic middle distillate cut as claimed in claim 9, wherein the isoparaffins to n-paraffins mass ratio is about 8.54:1 for a C₁₅ fraction of the synthetic middle distillate cut.
13. (Currently Amended) A synthetic middle distillate cut as claimed in ~~any one of claims 8 to 12~~, wherein a C₁₉ to C₂₄ fraction of the middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of between 3.3:1 and 5:1, ~~generally between 4:1 and 4.9:1~~.
14. (Currently Amended) A synthetic middle distillate cut as claimed in ~~any one of claims 8 to 13~~, wherein the mass ratio of isoparaffins to n-paraffins is adjusted by controlling the blend ratio of hydrocracked to straight run components of the synthetic middle distillate cut.
15. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having 30% straight run component is between 1:1 and 2:5:1.
16. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having 20% straight run component is between 1.5:1 and 3:5:1.

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17. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having 10% straight run component is between 2.3:1 and 4.3:1.
18. (Original) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio of the C₁₀ to C₁₈ fraction having substantially only a hydrocracked component is between 4:1 and 9:1.
19. (Currently Amended) A middle distillate cut as claimed in ~~any one of claims 8 to 18~~, wherein at least some of the isoparaffins are methyl branched.
20. (Currently Amended) A middle distillate cut as claimed in ~~any one of claims 8 to 19~~, wherein at least some of the isoparaffins are di-methyl branched.
21. (Currently Amended) A middle distillate cut as claimed in ~~any one of claims 8 to 20~~, wherein at least 30% (mass) of the isoparaffins are mono-methyl branched.
22. (Currently Amended) A middle distillate cut as claimed in ~~any one of claims 8 to 21~~, wherein at least some of the isoparaffins are ethyl branched.
23. through 25. (Canceled)
26. (Currently Amended) A middle distillate cut as claimed in ~~any one of claims 8 to 25~~, wherein the synthetic distillate is a FT product.
27. through 56. (Canceled)
57. (New) A synthetic middle distillate cut as claimed in claim 11, wherein the C₁₉ to C₂₄ fraction of the middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of between 4:1 and 4.9:1.